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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,886	02/14/2002	Toshiro Uemura	ASA-1063	6737

7590 06/18/2003

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EXAMINER

GABOR, OTILIA

ART UNIT PAPER NUMBER

2878

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/073,886	UEMURA ET AL.	
	Examiner	Art Unit	
	Otilia Gabor	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3,4</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 02/15/2001. It is noted, however, that applicant has not filed a certified copy of the above application as required by 35 U.S.C. 119(b).

Specification

2. A substitute specification including the claims is required pursuant to 37 CFR 1.125(a) because the writing is barely discernable.

A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and must be accompanied by: 1) a statement that the substitute specification contains no new matter; and 2) a marked-up copy showing the amendments to be made via the substitute specification relative to the specification at the time the substitute specification is filed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 7-12, 15-17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Burns (U. S. Patent 5757001).

- a radiation source 10 wherefrom two (or more) beams of light having two (or more) different wavelengths in the near-infrared range of 750-2500 nm is irradiated onto the paper currency 30
- a detector (or a plurality) 40 for receiving the radiation reflected from the paper and measuring the intensity of the reflected radiation
- a spectrophotometer 70 for obtaining the digitized signals from the detector 40 through the sensing electronics 60 and for generating the signals indicative of the paper absorbance at the said two (or more) different wavelengths
- a computer (control unit) 80 for calculating the difference in the paper absorbance between the measured absorbance and the absorbance corresponding to a previously determined and stored absorbance value for a particular paper at a particular wavelength
- a display on the computer 80 which displays the result of whether the currency is fake or not (paper discrimination) based on the obtained difference in the absorbance values.

The system further includes an efficient bill-handling mechanism for analyzing several bills per second. See Col.10, lines 28-31.

The absorbance of the paper was obtained at wavelengths having centers spanning in the range of 750-2500 nm (i.e., many different wavelengths used as shown in the Figs. 1-18 with special focus on 1452 nm and 1940 nm when moisture content of the paper is the determining factor and on 2100nm and 2300nm when oils from human contact is a determining factor). See Col.9, lines 20-54.

For calibration purposes the paper is irradiated at a third wavelength of 900 nm and reference data is generated for a currency that it is known to be genuine, in order to correct the measurement absorbance at that wavelength. See Col.11, lines 44-65.

Burns also discloses that taking the absorbance at a plurality of different wavelengths in the near-infrared range is optimal for increasing the accuracy of the measurement. See Col.8, lines 27-47.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5, 6, 13, 14, 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns.

Regarding claims 5 and 13 Burns fails to use the claimed transmitted light instead he uses the reflected light to measure absorbance, however using transmittance would have been obvious to one of ordinary skill in the art since it is well known in the

art that absorbance can be measured intermittently using reflected and/or transmitted radiation since reflectance and transmittance of radiation are inversely related.

Regarding claims 6 and 14 Burns uses the difference in the absorbance to obtain the paper characteristics instead of the absorbance ratio, however this constitutes only a matter of design choice since it is well known in the art to use the ratio or difference of two values to see how they measure one relative to the other.

Regarding claims 18-21 Burns fails to explicitly use a conveying mechanism with a speed of 500 sheets per second, however since he teaches that scanning of a plurality of sheets (sample currency) can be done in a second with a capacity to read a sheet in a millisecond, one of ordinary skill in the art would have been motivated to use a fast conveyor system to transport the sheets since a conveyor system is one of the well known conventional moving mechanism in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Otilia Gabor whose telephone number is 703-305-0384. The examiner can normally be reached on Monday-Friday between 8am-5pm.

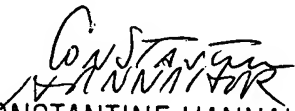
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 703-308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


CONSTANTINE HANNAHER
PRIMARY EXAMINER
GROUP ART UNIT 2878

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June 10, 2003